

**Terms of Reference (TOR) for NMFS AFSC**  
**2017 Economics & Human Dimensions Science Program Review**

**Purpose of the Review**

The National Marine Fisheries Service (NMFS) mission includes the stewardship of ocean and coastal ecosystem through science-based conservation and management aimed at sustaining the long-term use and benefits from these resources for the Nation. To ensure NMFS achieves this mission, it is appropriate to conduct periodic reviews of its economic and human dimensions science program.

Reviews of science programs at the NMFS Regional Science Centers (including associated laboratories) and, when appropriate, the Office of Science & Technology (ST), are conducted to:

- Evaluate the quality, relevance, and performance of science and research conducted in NMFS Regional Science Centers (Centers) and associated laboratories
- Strategically position the Centers and ST in planning future science and research.

**Objective**

The NMFS Economics & Human Dimensions Science Program conducts research and provides science advice that can be used to evaluate the consequences of management actions and to design policy that maximizes societal benefits from ocean and coastal ecosystems. Within this context, NMFS conducts economics and sociocultural research on commercial and recreational fisheries and fishing communities to provide information on the potential effects of fishery management options on people. Increasingly, this work takes into account ecosystem approaches and ecosystem based fisheries management considerations, by including species and fishery interactions and a changing coastal and marine environment due to climate change, eutrophication, oil spills, habitat extent and quality, severe storms, etc. In addition to supporting fisheries management, socioeconomic research undertaken by the program also informs conservation measures implemented to protect and recover marine protected species and restore habitat.

The objective for these reviews is to evaluate the current human dimensions and economic science programs of the Centers/ST. These programs are directed to provide social and economic information essential to the management, protection and restoration of ocean and coastal ecosystems, and ensuring sustainable benefits to the Nation. The work is done to support economic and human dimensions-related needs of the NMFS Regional Offices, the Offices of Sustainable Fisheries, Protected Resources, Habitat Conservation and Aquaculture. The data and analysis done by the program is also used by Fishery

Management Councils, Fisheries Management Commissions, state agencies, and non-governmental organizations. These reviews will assess the extent to which current science programs are focused on the priority information needs required to complete the NMFS mission, assess the quality and effectiveness of these programs, and make recommendations for the future.

### **Overarching Questions for Reviewers**

Science Center staff will provide information that describes their socioeconomic programs. The Office of Science and Technology will present information relevant to the program at a national level. The reviewers will use this information (and any ensuing discussion) to provide advice on the quality and relevance of the science program towards meeting management needs in the region. The reviewers should consider these overarching questions:

1. Does the Center/ST have clear goals and objectives for an economic and sociocultural science program? Do the Center's/ST's Programs provide information to address the priority needs of the Regional Offices, other NOAA managers, Fishery Management Councils, Fisheries Management Commissions, and other stakeholders that require economic and human dimensions -related information to achieve their mission? Do the Center's/ST's Programs have a strategic research agenda that anticipates evolving and long-term economic and sociocultural science needs including research to support adapting to climate change and implementation of ecosystem-based fishery management?
2. Are the Center's economic and sociocultural programs appropriately integrated with each other and with other science activities within the Center including, but not limited to, fishery and marine mammal stock assessments, ecosystem and multispecies ecological modeling, fishery observer programs, resource and environmental surveys, the Auke Bay Laboratory, and the Kodiak Laboratory? Are research efforts integrated, where relevant, with efforts at the regional offices and headquarters?
3. Is the status of data collection related to commercial fisheries, recreational fisheries, subsistence fisheries, fishing participants, and communities adequate to fulfill economic and sociocultural science research needs? Has the Center/ST developed strategies to obtain, manage, and make data accessible? Are there barriers that impede data collection and access to data held by other entities (e.g. states, commissions, other federal agencies, etc.) that could be used to support the Center/ST's research, and how can these barriers be overcome?

4. Are the Centers/ST using appropriate models and research tools to analyze data and provide management advice? Are they developing and using methods and models that contribute to the evaluation and exploration of ecosystem based fisheries management and other emerging issues? Are their barriers to adapting to address emerging issues?
5. Is the Center's/ST's social and economic information being used in living marine resource management advice? Are the existing mechanisms sufficient for ensuring this information is used appropriately? Are there barriers to the uptake of science provided by the Center and what steps can be taken to overcome these?
6. Is the Center providing the Best Available Science? Are the Center/ST's economic and sociocultural research products adequately peer-reviewed? Are the appropriate processes being used to ensure that scientific products meet professional standards and are of high caliber? How could a social science plan team provide additional peer-review or improve the quality and appropriateness of economic and human dimensions research provided to the NPFMC and AKRO?
7. Does the Center's/ST's program use the best tools to appropriately communicate research results to various managers, partners, stakeholders and the public?

In all cases, the reviewers should note areas where the Center's Economics and Human Dimensions Science Program is doing well and provide recommendations for areas that need improvement.